

Application No. 09/061,441
Response dated December 15, 2003
Reply to Office Action of 08/13/2003

This listing of claims will replace all prior versions of the claims of this application:

Listing of Claims

Claims 1 – 17 (cancelled)

Claim 18 (currently amended): In a A communications system transceiver, comprising:

a first antenna, and connected to a first input amplifier for amplifying signals received by said first antenna;

a second antenna, and connected to a second input amplifier for amplifying signals received by said second antenna;

an intermediate frequency stage connected to said second input amplifier; and

a selector disposed between said first input amplifier and said intermediate frequency stage and between said second antenna and said second input amplifier for selecting operation of the communications system transceiver between said first and second antennas,

wherein said first input amplifier includes a feedback loop for altering the operational characteristics of said first input amplifier in receiving mode.

Claim 19 (currently amended): In a A communications system transceiver as claimed in claim 18, wherein said feedback loop includes a switch for selectively activating said feedback loop.

Claim 20 (currently amended): In a A communications system transceiver as claimed in claim 18, wherein said feedback loop is a closed loop.

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Claim 21 (currently amended): In a A communications ~~system transceiver~~, comprising:
a first antenna, and ~~connected to~~ a first receiving amplifier for amplifying signals received by said first antenna;
a second antenna, and ~~connected to~~ a second receiving amplifier for amplifying signals received by said second antenna;
an intermediate frequency stage connected to said second receiving amplifier; and
a selector disposed between said first receiving amplifier and said intermediate frequency stage and between said second antenna and said second receiving amplifier for selecting operation of the communications system transceiver between said first and second antennas;[[.]]

said first and second receiving amplifiers providing plural signal receiving paths of different signal processing characteristics in a receiver diversity architecture wherein for a given incoming radio signal, either of the respective signal receiving paths are respectively selectably operable.

Claim 22 (currently amended): In a A communications ~~system transceiver~~ as claimed in claim 21, ~~wherein~~ said first receiving amplifier includes a feedback loop for altering the operational characteristics of said first receiving amplifier.

Claim 23 (currently amended): In a A communications ~~system transceiver~~ as claimed in claim 22, ~~wherein~~ said feedback loop includes a switch for selectively activating said feedback loop, to selectively change the signal processing characteristics for the incoming radio signal.

Claim 24. (currently amended): In a A communications ~~system transceiver~~ as claimed in claim 22, ~~wherein~~ said feedback loop is a closed loop.

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Claims 25 – 30 (cancelled).

Claim 31 (currently amended): In a A communications system transceiver,
comprising:

a first antenna and a second antenna

for selective operation in
receiving mode;

an input amplifier having two respective active operating conditions for amplifying
signals received by said first
antenna when selected for
operation in respective first active receiving modes;

an intermediate frequency stage

for selective connection with the
first antenna and the input amplifier in the first active
receiving modes, and for
selective connection to the
second antenna in a second active
receiving mode;

a selector system for selecting

between the first active receiving
modes and the second active
receiving mode;

wherein said input amplifier includes a feedback loop which is selectively closed in one
of the first active receiving modes, and is selectively open in another of the first active
receiving modes, such that the receiving path from the first antenna to the intermediate
frequency stage in the respective first active receiving modes selectively has two
respective different signal processing characteristics for a given incoming radio signal at
the first antenna, the input amplifier in addition to having two active operating conditions

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providing two different signal processing characteristics of said receiving path from the first antenna to the intermediate frequency stage, having a deactivated condition when said selector system selects the second active receiving mode.

Claim 32 (currently amended): In a A communications system transceiver as claimed in claim 31,

~~wherein~~ the signal receiving path from the first antenna to the intermediate frequency stage in the first receiving mode has a different signal processing characteristic than the signal receiving path from the second antenna to the intermediate frequency stage in the second receiving mode, for the case where the feedback loop is selectively closed, and for the case where the feedback loop is selectively open.

Claim 33 (currently amended): In a A communications system transceiver,
comprising:

a first antenna and a second antenna

for selective operation in
receiving mode;

an intermediate frequency stage

for selective connection with the
first antenna in a first
receiving mode, to
activate a first signal
receiving path, and for
selective connection to the
second antenna in a second
receiving mode, to activate a
second signal receiving

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path;

wherein the first signal receiving path from the first antenna to the intermediate frequency stage when activated in the first receiving mode has a different signal processing characteristic than the second signal receiving path from the second antenna to the intermediate frequency stage when activated in the second receiving mode; and

wherein the first signal receiving path from the first antenna to the intermediate frequency stage when activated in the first receiving mode has different circuit components for processing the received signal than the circuit components of the second signal receiving path from the second antenna to the intermediate frequency stage when activated in the second receiving mode.

Claim 34 (currently amended): In a A communications system transceiver as claimed in claim 33,

~~wherein~~ the first signal receiving path when activated includes an amplifier which provides a different signal processing characteristic than the second signal receiving path when activated, which lacks a corresponding amplifier.

Claim 35 (currently amended): In a communications system, diversity architecture receiving circuitry having first and second signal receiving paths, wherein for a given incoming radio signal, the first and second receiving paths are respectively selectable to provide respective different signal processing characteristics for the given incoming radio signal, and

wherein the first signal receiving path when activated in a first receiving mode has different circuit components for processing the received signal than the circuit components of the second signal receiving path when activated in a second receiving mode.

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Claim 36 (previously presented): In a communications system according to claim 35, the first signal receiving path comprising an amplifier for the received radio signal with a feedback loop for providing a signal receiving path with different amplifier characteristics than the second signal receiving path which lacks a corresponding amplifier.

Claim 37 (currently amended): In a [[A]] communications system as claimed in claim 36, ~~wherein~~ said feedback loop includes a switch for selectively activating said feedback loop and for providing a first signal receiving path when the feedback loop is activated having different amplifier characteristics than the second signal receiving path which lacks a corresponding amplifier with a feedback loop including a switch for selectively activating said feedback loop.

Claim 38 (currently amended): In a [[A]] communications system as claimed in claim 36, ~~wherein~~ said feedback loop is a closed loop for providing a first signal receiving path when the feedback loop is closed having different amplifier characteristics than the second signal receiving path which lacks a corresponding amplifier with a closed feedback loop.

Claim 39 (currently amended): In a [[A]] communication system as claimed in claim 35, with a common intermediate frequency stage shared by the first and second signal receiving paths; a selector system for selecting respectively the first and second receiving paths, first and second antennas for supplying a given incoming radio signal to the first and second signal receiving paths, respectively, and a low noise amplifier in the first signal receiving path between the first antenna and the selector system to provide a different signal processing characteristic for the given incoming radio signal in the first receiving path than in the second receiving path which lacks a corresponding low noise amplifier between the second antenna and the selector system.

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Claim 40 (currently amended): In a [[A]] communication system as claimed in claim 39, ~~with~~ a transmitter for coupling with the second antenna, the selector system in a transmit mode connecting the transmitter with the second antenna, and a low pass filter between the selector system and the second antenna for filtering the incoming radio signal from the second antenna in receiving mode when the second receiving path is selected, while reducing the loss in transmit mode in comparison with the use of a bandpass filter.

Claim 41 (currently amended): In a [[A]] communication system as claimed in claim 35, ~~wherein~~ the signal receiving path from the first antenna to the intermediate frequency stage when activated in the first receiving mode provides an enhanced receiver sensitivity characteristic, and the signal receiving path from the second antenna to the intermediate frequency stage when activated in the second receiving mode providing enhanced interference rejection of signals received by the second antenna.

Claim 42 (currently amended): In a [[A]] communications system ~~transceiver~~,
~~comprising:~~
a first antenna and a second antenna
for selective operation in
receiving mode;
an intermediate frequency stage
for selective connection with the
first antenna in a first

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receiving mode, to
activate a first signal
receiving path, and for
selective connection to the
second antenna in a second
receiving mode, to activate a
second signal receiving
path;

wherein the first signal receiving path when activated includes an amplifier component which is lacking in the second signal receiving path when activated, such that the first signal receiving path when activated in the first receiving mode has a different signal processing characteristic than the second signal receiving path when activated in the second receiving mode.

Claim 43 (currently amended): In a [[A]] communications ~~system~~ transceiver, comprising:

a first antenna and a second antenna
for selective operation in
receiving mode;
an intermediate frequency stage
for selective connection with the
first antenna in a first
receiving mode, to
activate a first signal
receiving path, and for
selective connection to the
second antenna in a second
receiving mode, to activate a

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second signal receiving path;
wherein the first signal receiving path from the first antenna to the intermediate frequency stage when activated in the first receiving mode has a different signal processing characteristic than the second signal receiving path from the second antenna to the intermediate frequency stage when activated in the second receiving mode; and
wherein the signal receiving path from the first antenna to the intermediate frequency stage when activated in the first receiving mode provides an enhanced receiver sensitivity characteristic, and the signal receiving path from the second antenna to the intermediate frequency stage when activated in the second receiving mode providing enhanced interference rejection of signals received by the second antenna.

Claim 44 (previously presented): In a communications system, diversity architecture receiving circuitry having first and second signal receiving paths, wherein for a given incoming radio signal, the first and second receiving paths are respectively selectable to provide respective different signal processing characteristics for the given incoming radio signal.

Claim 45 (new): In a communication system as claimed in claim 44, the second signal receiving path comprising an antenna, and a transmitter for coupling with the antenna, the selector system in a transmit mode connecting the transmitter with the second antenna, and a low pass filter between the selector system and the second antenna for filtering the incoming radio signal from the second antenna in receiving mode when the second receiving path is selected, while reducing the loss in transmit mode in comparison with the use of a bandpass filter.